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Severe uremic leontiasis ossea ameliorated by total parathyroidectomy

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Figure 1 | Lateral view of skull before parathyroidectomy.

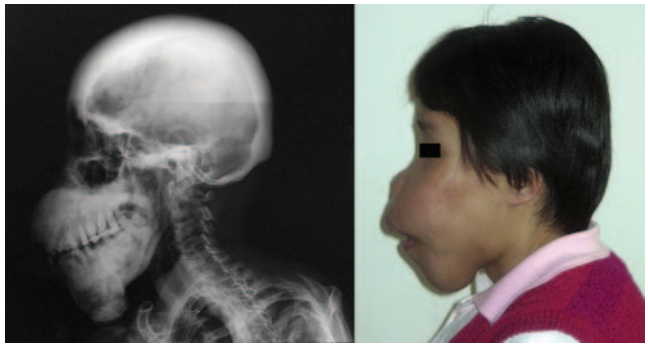

Figure 2 | Lateral view of skull after parathyroidectomy.

A 39-year-old woman with end-stage renal disease due to chronic glomerulonephritis had been undergoing regular hemodialysis for 18 years. She was noncompliant with diet and did not take any phosphate binders or vitamin D. Thirteen years ago she began to develop facial deformity, which was progressive (Figure 1). This was accompanied by a 14-cm shortening of her height, kyphoscoliosis, and an inability to walk because of severe leg pain. The level of serum intact parathyroid hormone was >2000 pg/ml, and serum calcium, phosphate, and alkaline phosphatase were 9.3, 6.7 mg per 100 ml, and 1180 IU/l, respectively. The ultrasonography showed four hyperplastic parathyroid glands with rich blood supply. Skull X-ray showed thickening of bone plates of skull and multiple areas of osteolysis, leading to a change in the shape of the bones of facial cranium with enlarged jaw, blunting of the angle of mandible, and disappearance of the lamina dura of alveolar bone (Figure 1). Total parathyroidectomy was successfully carried out with subsequent reduction of intact parathyroid hormone to 100 pg/ml, and improvement of the serum levels of calcium, phosphate, and alkaline phosphatase. Her general and nutrition state improved with the stabilization of her body height and improvement of leg pain. Her facial deformation also improved with corresponding improvement in her skull X-ray (Figure 2). Uremic leontiasis is a rare form of renal osteodystrophy associated with massive thickening of the cranial vault and facial bones.